

Initial assessment:

- Duration of infertility: coital frequency, contraceptive use
- Lifestyle issues: alcohol, smoking, bodyweight, drugs
- Medical and sexual history, physical examination



Preconceptional health:

- Folate
- Rubella
- TFT
- STI screening
- Cervical screening
- Assessment scan



Couples are advised to get fertility investigations if:

- 35 yoa or younger and 12 months of unprotected intercourse
- 36 years or older and 6 months of unprotected intercourse
- Immediately if 40 or older



Important questions to ask:

- Anxiety levels about fertility
- Number of children the couple wants



CONSIDER IMMEDIATE REFERRAL IF AMH < 15



SEMEN ANALYSIS

ABNORMAL
REPEAT IN 6 WEEKS

NORMAL
Follow female pathway

REFER PATIENT

FEMALE OVULATING? 1

Ovulation is defined by regular menses 28+/- 7days
Irregular is >7 days variation between cycles
No need for P4 on day 21 confirmation

NO (PROLONGED IRREGULAR CYCLES) 2

1- PCOS? AMH + androgen profile + PRL + TSH + ATA
2- WHO I (Hypo-Hypo): AMH + FSH/LH + PRL + TSH + ATA consider bone density, BMI < 19, excessive exercise.
* Consider tubal patency tests (Hy FoSy best option) if risk factors for tubal obstruction (Endometriosis, Previous pelvic surgery, previous PID or chlamydia infection, complicated appendicitis)

YES

Test for AMH + TSH + ATA
Refer patients with results SA Included

WHO I

WHO I + ABNORMAL SA

REFER PATIENT

NORMAL SA
TSI first line treatment
Consider GnRH pump
Gonadotropins for stimulation always using Menopur (adds LH activity, crucial for follicular development in these Patients)

PCOS

PCOS + ABNORMAL SEMEN ANALYSIS

REFER PATIENT

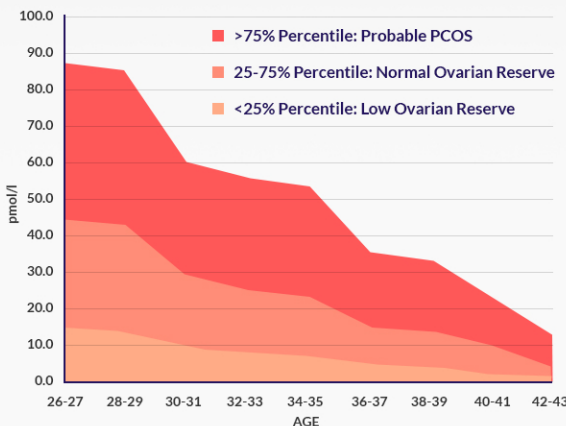
PCOS + NORMAL SEMEN ANALYSIS
TSI first line treatment
Letrozole as per protocol
Clomid +/- metroformin depending on androgen profile
Gonadotropins



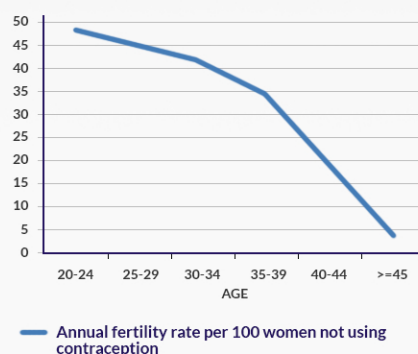
Number of attempts of TSI:

- <35: 6-12 attempts
- <40: 3-6 attempts
- 40 or older: 3 attempts

AMH Normal Values per Age



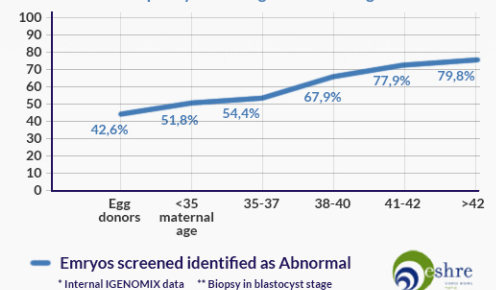
Annual fertility rate per 100 women not using contraception



Maternal age and aneuploidy in blastocyst

Blastocyst biopsies and NGS cycles performed in 2016

Incidence of aneuploidy according to maternal age



ART and perinatal outcomes

- Twins have 5-10 fold higher risks
- Singletons:
 - Preterm birth 2-3 fold increased
 - Small-for-gestational age 1.5 fold increased
 - Perinatal death 2-fold increased
 - Large-for-gestational 1.7-fold increased after frozen embryo transfer

Cut-off values of sperm parameters according to the WHO 1999 and 2010 criteria and nomenclature

	WHO 1999	WHO 2010	Nomenclature if below cut-off value
Volume	2 ml	1.5 ml	Hypoospermia*
Sperm concentration	20x10 ⁶ spermatozoa / ml	15x10 ⁶ spermatozoa / ml	Oligozoospermia**
Motility (A+B)***	50%	32%	Asthenozoospermia
Morphology	30% normally formed	4% normally formed***	Teratozoospermia

* No ejaculate is aspermia
** If there are no spermatozoa in the ejaculate it is called azoospermia
*** A-motility is fast forward progressive, B-motility is slow progressive
**** According to the Tygerberg criteria (Kurger et al., 1988)